

UNDERWATER ALERT SYSTEM

5

Abstract of The Disclosure

In a first preferred embodiment, an underwater alert system (10) comprises a transmitter assembly (12), a receiver assembly (16) and a mask (18). The transmitter assembly (12), carried by a first diver (14), has a waterproof transmitter housing (38) for carrying an alert switch (68), a transmitter (66) and a transmitting element (80). The alert switch (68) generates an electrical alert actuation signal (86) responsive to the alert switch (68) being actuated, either manually by the first diver (14) or automatically by the first diver's equipment. The transmitter (66) generates a predetermined electrical transmit signal (98) responsive to receiving the electrical alert actuation signal (86). The transmitting element (80) generates a predetermined wireless signal (36) responsive to receiving the predetermined electrical transmit signal (98). The receiver assembly (16), carried by a second diver (20), has a waterproof receiver housing (48) for carrying a receiving element (126), a receiver (108) and an alert device (110). The receiving element (126) generates an electrical receive signal (152) responsive to receiving the predetermined wireless signal (36). The receiver (108) generates a predetermined electrical alert attention signal (154) responsive to receiving the electrical receive signal (152). The alert device (110), such as a visual (112), an audible (114) or a tactile (116) alert device, generates a predetermined alert (161), such as light (162), sound (164) or vibration (166), respectively, responsive to receiving the predetermined electrical alert attention signal (154). The mask (18) carries the first receiver assembly (16), either separate from or integral with the first mask (18), in a way that permits the predetermined alert (161) to gain the attention of the second diver (20) when the mask (18) is worn on the second diver's head. Preferably, the transmitter assembly (12) and the receiver assembly (16) share a common electrical identity (77, 125), such as a frequency channel, an address or a code, to provide discreet communications between divers. In a second preferred embodiment, the underwater alert system (10) includes a first transceiver assembly (232), carried by, integrally to or attached to, the first diver's mask, and a second transceiver assembly (254), carried by, integrally to or attached to, the second diver's mask. In a third preferred embodiment, the underwater alert system (10) includes, the transmitter assembly (12) or the first transceiver assembly (232) electrically coupled to the first diver's dive computer (252) to permit dive computer data, associated with the first diver (14), or an alarm associated with the dive computer data to be transmitted to and received by the receiver assembly (16) or the second transceiver assembly (254), respectively, carried by the second diver (20).